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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,777	03/24/2004	Seung Min Lee	2080-3242	6072

7590 11/01/2005
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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,777

Applicant(s)

LEE ET AL.

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-18 is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The following title is suggested: --PLASMA LIGHTING BULB WITH METAL PROVIDED IN GROOVES FORMED ON SURFACE THEREOF--.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakasegawa (US 6,023,130).
5. Regarding independent claim 1, Figure 2(a) of Sakasegawa shows a plasma lighting device comprising a bulb (10, 14) emitting light, being formed of a transparent material (col. 8, ln. 41-47), and having a plurality of grooves (13) having a predetermined depth formed on a surface of the bulb; and a metal (12) formed in the grooves.
6. Regarding claim 2, Sakasegawa discloses the transparent material including one of glass and plastic (col. 8, ln. 36-40).

7. Regarding claim 3, Figure 2(a) of Sakasegawa shows the surface of the bulb including a plurality of patterns having one of a circular shape, a triangular shape, and a polygonal shape.
8. Regarding claim 4, Figure 2(a) of Sakasegawa shows the grooves formed on at least one of an outer surface and an inner surface of the bulb.
9. Regarding claim 5, Figure 2(a) of Sakasegawa shows a cross-section of the grooves formed of one of a semicircular shape, a V-shape, and a polygonal shape.
10. Regarding claim 6, Figure 2(a) of Sakasegawa shows the metal formed along the grooves in the form of a wire.
11. Regarding claim 7, Figure 2(a) of Sakasegawa shows the metal filled within the grooves.
12. Regarding claim 8, Sakasegawa discloses the metal including one of copper, aluminum, and silver (col. 13, ln. 62-65).
13. Regarding independent claim 9, Figure 2(a) of Sakasegawa shows a plasma lighting device comprising a bulb (10, 14) emitting light, being formed of a transparent material (col. 8, ln. 41-47), and having a plurality of patterns formed on a surface of the bulb due to an alignment of a plurality of grooves (13) having a predetermined depth; and a metal (12) formed in the grooves.
14. Regarding claim 10, Sakasegawa discloses the transparent material including one of glass and plastic (col. 8, ln. 36-40).

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15. Regarding claim 11, Figure 2(a) of Sakasegawa shows the surface of the bulb including a plurality of patterns having one of a circular shape, a triangular shape, and a polygonal shape.

16. Regarding claim 12, Figure 2(a) of Sakasegawa shows the grooves formed on at least one of an outer surface and an inner surface of the bulb.

17. Regarding claim 13, Figure 2(a) of Sakasegawa shows a cross-section of the grooves formed of one of a semicircular shape, a V-shape, and a polygonal shape.

18. Regarding claim 14, Sakasegawa discloses the metal including one of copper, aluminum, and silver (col. 13, ln. 62-65).

Allowable Subject Matter

19. Claims 15-18 are allowed.

20. The following is a statement of reasons for the indication of allowable subject matter: Regarding independent claim 15, the prior art of record neither shows or suggests a plasma lighting bulb comprising, in addition to other limitations of the claim, a plurality of hexagonal patterns formed on an outer surface of the bulb due to an alignment of a plurality of grooves having a predetermined depth. Due to their dependency upon independent claim 15, claims 16-18 are also allowable.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Min (US 6,752,884) discloses a mesh screen for an electrodeless lighting system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

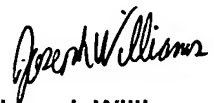
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman
Examiner
Art Unit 2879

kq


31 October 2005


Joseph Williams
Primary Examiner
Art Unit 2879